

## REMARKS

Reconsideration and allowance of this application are respectfully requested in light of the above amendments and the following remarks.

Claims 1-9 have been canceled in favor of new claims 10-14. Support for the subject matter of the new claims is provided for example in the original claims, Figs. 11 and 12, and paragraphs [0036]-[0041] of the filed specification. (It should be noted that references herein to the specification and drawings are for illustrative purposes only and are not intended to limit the scope of the invention to the referenced embodiments.)

Applicants acknowledge with appreciation the indication in the Office Action that claim 4 is allowable. The subject matter of claims 1-3 and allowable claim 4 has been integrated within new claim 10. Independent claim 13 is a method claim corresponding to the subject matter of apparatus claim 10. Therefore, allowance of claims 10 and 13, and claims 11 and 14 respectively dependent therefrom, is deemed to be warranted. Thus, all except new claim 12 comes within the indication of allowable subject matter in the office action.

The Abstract has been amended to overcome the objection thereto.

Claims 1-3 and 5-9 were rejected, under 35 USC §103(a), as being unpatentable over Dabak (US 6,724,828). To the extent these rejections may be deemed applicable to new claim 12, Applicants respectfully traverse.

Claim 12 recites features of canceled claim 6 and defines a communication system having: (1) a channel matrix estimator that estimates and outputs third transmission data by estimating the pattern of a space-time block code using a channel matrix represented by a channel estimation value and a plurality of slots of received data and (2) a detector that estimates

first and second transmission data using the channel estimation value, the plurality of slots of received data, and the third transmission data. The claimed subject matter provides na advantage of producing transmission data based on the pattern of a space-time block code and, thereby, provides an improved transmission rate in addition to the coding and diversity gain achieved with conventional space-time block codes (see specification page 3, lines 4-6, and page 5, lines 16-18).

The Applicants respectfully submit that Dabak does not disclose or suggest the above-mentioned subject matter of claim 12. Although the Office Action proposes that Dabak discloses estimating a channel matrix using a plurality of slots of data (see Office Action page 4, lines 5-6), Dabak does not disclose the Applicants' claimed subject matter of estimating the pattern of a space-time block code using a channel matrix represented by a channel estimation value. And although the Office Action proposes that Dabak discloses estimating transmission data based on a data assignment pattern of a channel matrix (see page 4, lines 6-7), Dabak does not disclose the Applicants' claimed subject matter of estimating transmission data using the pattern of a space-time block code estimated from a channel matrix represented by a channel estimation value.

Accordingly, the Applicants submit that Dabak does not anticipate or render obvious the subject matter now defined by claim 12. Therefore, allowance of claim 12 is considered to be warranted.

In view of the above, it is submitted that this application is in condition for allowance, and a notice to that effect is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,

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